Conclusion: Amiodarone is more effective than sotalol in the prevention of recurrent symptomatic atrial fibrillation, possibly because of the different modes of action of the two drugs.

11:45

884-6 Effect of Chemical vs Electrical Cardioversion of Chronic Atrial Fibrillation on Left Atrial Appendage Function

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Background: Cardioversion (CV) of atrial fibrillation (AF) increases the risk of stroke, presumably due to decreased both left atrial (LAA) and left atrial appendage (LAA) mechanical function. It has been suggested that a component of dysfunction relates to the mode of CV and is less severe in pts undergoing chemical (CCV) than electrical CV (ECV).

Methods: We evaluated the effect of the mode of CV on LAA and LA mechanical function and LA spontaneous contrast (SC) formation in 54 pts with AF >5 weeks duration. All pts were subjected to CCV; those who were treated unsuccessfully were subjected to ECV. All pts were anticoagulated with warfarin for at least 4 weeks and none had atrial thrombus.

Results: CCV (oral loading with Propafenone) was successful in 12 pts (22%), 40 pts underwent ECV with restoration of sinus rhythm and 2 pts were excluded from the study as both CCV and ECV was unsuccessful. LAA emptying (LAA-E) and filling (LAA-F) velocities (Transesophageal echo) were measured pre- and post-CV; SC in the left atrium was visually graded (range 1+–4+). There were no significant differences between the 2 groups for age, gender, left atrial size, EF, NYHA class (</= II), associated cardiopathies and duration of AF.

	CCV (n = 12)			ECV (n = 40)		
	LAA-E (cm/sec)	LAA-F (cm/sec)	SC LAA-E	(cm/sec)	LAA-F (cm/sec)	SC
pre-CV	43 ± 16	47 ± 13	0.9 ± 1	40 ± 18	45 ± 15	1.1 ± 1.2
post-CV	27 ± 8*	34 ± 10*	1.4 ± 1.5*	25 ± 10*	31 ± 16*	1.7 ± 1.4*

* pre vs post-: p < 0.005; *pre vs post-: p < 0.01; CCV vs ECV: p ns

Post CV peak E wave, peak A wave, E/A ratio, VTI A wave, VTI E wave and VTI A wave/Tot VTI were similar for CCV and ECV groups.

Conclusions: CV of chronic AF, whether CCV or ECV, is associated with a significant decrease in LAA mechanical function. In pts with chronic AF of >5 weeks duration, there is no evidence that ECV produces greater post CV left atrial and LAA dysfunction than CCV.

885 Considerations in the Diagnosis and Treatment of Acute Myocardial Infarction

Wednesday, April 1, 1998, 10:30 a.m.–Noon
Georgia World Congress Center, Room 261W

10:30

885-1 The Role of Emergency Room Echocardiography in Triaging Patients With Chest Pain at Intermediate Risk for Acute Myocardial Infarction: A Substudy of CHEER

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Background: The predictive value of a diagnostic test depends on the population being studied. Although 2-D echo has been shown to be useful in identifying patients (pts) with chest pain who subsequently develop myocardial infarction (MI), the role of emergency room (ER) echo in the triage of *intermediate risk* pts is not known.

Methods: Two-D echo was prospectively performed in 178 pts with chest pain at intermediate risk (by the AHCPR guidelines) for acute MI. Echo was performed in the following the enrollment in the CHEER (CHest pain Evaluation in the Emergency Room) study.

Results: Median age was 59 years and 56% were male. ECG was abnormal in 52%, previous MI was present in 17%. Echo showed abnormal wall motion in 71 pts (40%). The initial CK-MB was elevated in 5 pts. During hospitalization, 7 pts (4%) developed acute MI and 6 of them had abnormal wall motion (sensitivity of 86% and positive predictive value 8%) and abnormal ECG. Abnormal wall motion on 2-D echo was univariately associated with acute MI ($p < 0.03$), but was no longer significant in predicting acute MI after adjusting for ECG and CK-MB.

Conclusion: 1) Intermediate risk pts have a low incidence of MI. 2) Wall motion abnormality is univariately associated with acute MI. 3) However, abnormal echo lacks the incremental value over ECG and enzyme data. 4) Two-D echo in the ER is not clinically useful in pts with chest pain at intermediate risk.

10:45

885-2 Non-culprit Artery Flow Improves Over Time When Flow Improves in the Associated Culprit Artery

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While a great deal of attention has been focused on flow in the infarct related artery in the setting of acute MI, flow in the non-culprit artery has not been studied as extensively. This is in part because flow in the non-culprit artery has been assumed to be normal and used as the "gold standard" in the qualitative assessment of flow in the culprit artery. Using the quantitative Corrected TIMI Frame Count (CTFC) we have recently shown that flow in the non-culprit artery in acute MI is abnormally slowed. The goal of this study was to determine if changes in non-culprit artery flow are correlated with changes in the associated culprit artery flow in acute MI. The cineframes needed for dye to first reach distal landmarks (CTFC) were counted in the TIMI 4, 10A, and 10B trials. In a paired analysis, the flow (CTFC) in non-culprit arteries improved by 8% between 60 minutes and 90 minutes following thrombolysis (34.9 ± 16.7 vs. 32.1 ± 15.6, n = 252, $p < 0.00005$). When flow improved in the associated culprit artery between 60 minutes and 90 minutes, non-culprit artery flow improved by 13% (36.0 ± 17.7 vs. 31.3 ± 15.7, a change of 4.68 ± 11.1, n = 109, $p < 0.00005$). When flow did not improve in the associated culprit artery, there was no significant improvement in non-culprit flow between 60 minutes and 90 minutes (33.8 ± 15.4 vs. 33.3 ± 16.0, a change of 0.5 ± 9.2, n = 120, p = 0.56).

Conclusion: Changes in non-culprit artery flow are related to changes in culprit artery flow. Coronary blood flow improvements following thrombolysis appear to be an interrelated global phenomenon rather than being isolated to the culprit artery.

11:00

885-3 Resolution of ST-Segment Elevation 90 Minutes After Thrombolysis for Acute Myocardial Infarction Predicts Outcome: A GUSTO-III Substudy

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Resolution of ST-segment elevation 180 min after thrombolysis for acute MI predicts acute outcomes, but if a 90-min ECG is also predictive earlier intervention is possible. This substudy enrolled 1783 pts from an international trial of alteplase vs. reteplase treatment within 6 h of MI. ECGs were obtained at baseline, 90, and 180 min after lytics. The sum of the ST-segment resolution at 90 and 180 min was categorized as <30%, 30%–70%, or >70% resolved versus baseline. We compared groups to determine if ST resolution at 90 min was as predictive as at 180 min.

30-day Outcomes

		ST resolution			
	<30%	30–70%	>70%	p	
90 min	ReMI	7.5%	3.0%	2.6%	0.01
	Death	10.6%	6.0%	3.1%0	0.01
180 min	ReMI	8.4%	2.9%	3.4%	0.04
	Death	14.3%	6.5%	3.4%	<0.0001

Conclusion: Persistent ST-segment elevation as early as 90 min after thrombolysis is prognostically important, as is elevation persisting at 3 hours. These data should help identify pts who may benefit from early intervention. Treatment strategies should be developed for pts with continued ST-segment elevation after thrombolysis.

11:15

885-4 Reduction in Intracranial Hemorrhage Associated With Immediate Beta-Blocker Therapy in Patients With Acute Myocardial Infarction Treated With Tissue Plasminogen Activator

H.V. Barron, A.C. Rundle, J.M. Gore, J.H. Gurwitz, J. Penney. *University of California, San Francisco and Genentech Inc. South San Francisco, California, USA*

Background: In the setting of an acute myocardial infarction (AMI), immediate beta-blocker therapy reduces the incidence of reinfarction and recurrent chest pain in patients receiving t-PA. Previously published data suggest that such therapy may also reduce the rate of intracranial hemorrhage (ICH).